

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-8 (Cancelled).

9. (Original) A DC-DC converter comprising:

a $\Delta\Sigma$ -modulator for $\Delta\Sigma$ -modulating an analog signal such that switching of a switching element is made in response to the modulated signal;

at least one integrated constituting said $\Delta\Sigma$ -modulator and provided with a gain-adjusting means; and

a detector circuit for detecting a current flowing internally of said DC-DC converter, a voltage internally of said DC-DC converter, or a converter output voltage,

wherein said gain-adjusting means adjusts gain of said integrator based on a signal from said detector circuit such that output of said integrator becomes a desired voltage.

10. (Original) A DC-DC converter according to claim 9, wherein said detector circuit detects an output voltage of said at least one integrator provided with said gain-adjusting means and outputs a signal for adjusting the gain of said at least one integrator provided with said gain-adjusting means.

11. (Original) A DC-DC converter according to claim 9, wherein said gain-adjusting means comprises a comparator that supplies a control signal to a switch element for said integrator such that said switch element is turned off if a converter output current is great and is turned on if the converter output current is small.

12. (Currently Amended) A DC-DC converter according to claim 9-~~or~~ 10,
wherein said gain-adjusting means comprises an absolute value circuit for rectifying
output of said integrator, an averaging circuit for averaging the rectified signal, an
adjustment error amplifier for comparing the averaged signal with a reference voltage and
amplifying the differential signal, and a transistor located at an input of said integrator,
which is controlled by the signal amplified at said adjustment error amplifier.